



The New R&A Structure in Heliophysics

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HPD ROSES Selections for FY13 Funds

Program	Due Date	Sel. Date	# Subm,	# Sel.	% Sel.	Avg. Award
SH SR&T	05/18	11/07	189	32	17	195k*
Geospace SR&T	06/15	11/20	199	21	11	172k*
HGIP SH	05/18	10/06	44	11	25	116k
HGIP Geospace	06/15	11/20	58	10	17	124k
'11 LWS TR&T	02/24	9/17	127	35	28	129k
'11 LWS Strategic Cap. (+NSF)	03/15	02/20	51	8	16	351k (538k)
HDEE	07/20	01/23	29	10	35	52k

* includes LCAS and Instr. Dev. awards

- Low success rates overall
- Growing number of submissions and constant \$\$\$
- Review process is rather long



Rationale for Restructuring 1

We had many Discussions with HPS, MOWGs and received the 2013 Decadal Survey. In response, we tried to address Problems with this Restructuring

Problems of R&A:

1: Duplication of Proposals Submitted to Multiple Programs within ROSES Year

Proposed Solution:

- Restricting Programs by Excluding Focus Opportunities from General Programs

Intended Effects:

- Reduced Review Burden on Community
- Higher Average Success Rates (higher proposal efficiency)
- Accelerated Review Process

Rationale for Restructuring 2

2: Stovepipe Problem – Proposals that Cross Traditional Sub-Disciplines at Perceived Disadvantage

Proposed Solution:

- Combining Programs Traditionally Separated by Science Discipline

Intended Effects:

- Encourage Submission in (new) Cross-Discipline Areas
- Increase Effectiveness of Scarce Research Funds



Rationale for Restructuring 3

3: DRIVE Initiative: Aligning Heliophysics R&A with 2013 Decadal Survey Recommendations

Proposed Solution:

- Future Realignment: 2013 DS Recommends Transfer of (some) Future Mission Line Funding into R&A Program (GI-Type?)
- Create Vehicle(s) for Future Funding

Intended Effects:

- Adequate Success Rates/Proposal Efficiency
- Better Utilization of Existing Heliophysics Observations

Rationale for Restructuring 4

4: Ineffectiveness of Notices of Intent

Proposed/Tested Solution:

- Step-1 Proposals Replace NOIs Across All Heliophysics Programs
- Require Proposing Teams Not to Change from Step 1 to Step 2

Intended Effects:

- Step-1 Proposals Allow Early Identification of Non-Conflicted Reviewers, Formation of Panels
- Net 6-Week Reduction of Review Process Between Submission and Notification



Old Program

Old (ROSES12 and Previous):

B.1 Overview

B.2 Heliophysics Theory Program

B.3 Geospace Science SR&T

- Supp. Res.
- Low-Cost Access to Space
- Instr. & Techn. Development

B.4 Solar/Heliospheric SR&T

- Supp. Res.
- Low-Cost Access to Space
- Instrument Development

B.5 Hel. Guest Investigators

B.6 LWS TR&T

- Focus Topics/Teams
- Targeted Investigations

B.7 LWS Strategic Capabilities

B.8 Heliophysics Data

Environment Enhancements



Old vs New Program

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B.1 Overview

B.2 Heliophysics Supp. Res.

B.3 Heliophysics TIDeS

- Low-Cost Access to Space
- Instr. & Techn. Dev.
- Lab. Nucl., Atom. & Plasma

B.4 Heliophysics Guest
Investigators

B.5 Heliophysics Grand
Challenges Research

- H-Theory, Modeling, Simul.

B.6 Heliophysics LWS Science

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B.7 Heliophysics Infrastructure &
Data Environment Enhancements



Mapping Elements of Old into New Program 1

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Mapping Elements of Old into New Program 2

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Heliophysics Supporting Research Areas

SR Science Areas Cover Cross-Disciplinary Research:

Proposals must Identify a Primary Science Area Chosen from the Following List:

1. Solar Interior;
2. Solar Photosphere;
3. Solar Chromosphere, Transition Region, and Corona;
4. Inner Heliosphere;
5. Outer Heliosphere and the Interstellar Boundary
6. **Solar Wind – Magnetosphere Coupling / Dayside Outer Magnetosphere**
7. Inner Magnetosphere **[NOT Competed this Year, see H-GI Program]**
8. Magnetosphere – Ionosphere Coupling / Magnetotail
9. Ionosphere – Atmosphere Coupling / Neutral Atmosphere
10. **Solar Output – Ionosphere/Atmosphere Coupling**
11. Planetary Magnetospheres (not Earth)



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Heliophysics Technology and Instrument Development for Science: Low-Cost Access to Space

Change from ROSES12: No Separate Proposals for LCAS Co-Is



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Special Opportunities/Exclusions in ROSES13: H-GI

Van Allen Probes Guest Investigators:

Science Closely Related to the Recently Launched Van Allen Probes

Consequence:

Inner Magnetosphere Science Area NOT Competed in H-SR

H-LWS Science Targeted Investigation Solicitation for SDO Science

Consequence:

SDO Investigations not Solicited in H-GI



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Special Opportunities in ROSES13: H-LWS

1: Focused Science Topics:

- (a) Short-term Solar/Atmospheric Variability and Climate*
- (b) Magnetic Flux Ropes from the Sun to the Heliosphere*
- (c) Connection between Solar Interplanetary Structures and the Response of Earth's Radiation Belts*
- (d) Thermospheric Wind Dynamics during Geomagnetic Storms and their Influence on the Coupled Magnetosphere-Ionosphere-Thermosphere System*

Consequence:

Focused Science Topics NOT Competed in H-SR or H-GI

2: Targeted Investigations:

Science Analysis for the Solar Dynamics Observatory (SDO)*

Consequence:

SDO Targeted Investigations NOT Competed in H-GI

3: Cross-Discipline Infrastructure Building*

*see Details in ROSES



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Special Opportunities in ROSES13: H-LWS

4: Strategic Capabilities

Not Competed in ROSES-13



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Heliophysics R&A ROSES-13 Due Dates (all 2013)

Appendix	Full Program Name	Program Acronym	Step-1 Due Date	Full Proposal Due Date
B.2	Heliophysics Supporting Research	H-SR	May 15	July 17
B.3	Heliophysics Technology and Instrument Development Program	H-TIDeS	June 14	August 15
B.4	Heliophysics Guest Investigators	H-GI	March 15	June 14
B.5	Heliophysics Grand Challenges Research	H-GCR	August 15	October 11
B.6	Heliophysics Living With a Star Science	H-LWS	March 1 March 15	May 1
B.7	Heliophysics Infrastructure and Data Environment Enhancements	H-IDEE	May 15	July 17



Step-1/Step-2 Process

All Calls in Heliophysics Will Now Follow a Two-Step Process:

- Title and Investigators Cannot be Changed Between the Step-1 and Step-2 Proposals
- Compliance Checks in Step 1 and/or Step 2
- Step-1 Proposals Require Science Goals and Methodology

Program-Specific:

- Single Page for Goals/Methodology
- No Review of Step-1 Proposals in **H-GCR, H-SR, H-TIDeS, H-LWS, H-IDEE**
- ~2 Months Between Step-1 and Step-2 Due Date
- **H-GI:** Three Pages for Goals/Methodology
- Review for Importance of Science, Feasibility of Methodology, and Likelihood of Success
- Review Resulting in Encouragement/Discouragement to Proceed to Full Proposal in H-GI
- ~3 Months Between Step-1 and Step-2 Due Date